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UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

In re: CATHODE RAY TUBE (CRT)  
ANTITRUST LITIGATION

MDL No. 1917  
JAMS Ref. No. 1100054618

This Document Relates to:  
ALL DIRECT ACTION CASES

**REPORT AND RECOMMENDATION  
REGARDING DEFENDANTS' MOTION TO  
STRIKE PROPOSED EXPERT TESTIMONY**

1 To the Honorable Samuel Conti, United States District Judge:

2 On April 29, 2013, the Interim Special Master heard Defendants' Motion to Strike  
3 Proposed Expert Testimony of Dr. Janet S. Netz . Having considered the moving papers,  
4 evidence and the arguments of the parties, and good cause appearing, the Interim Special Master  
5 now makes the following Report and Recommendation. For the reasons set forth below, it is  
6 recommended that the Court DENY Defendants' motion.

7 Introduction

8 This multi-district litigation involves allegations of a global price-fixing cartel among  
9 manufacturers of cathode ray tubes (CRTs). CRTs are a display technology used for the most  
10 part in televisions and computer monitors. See generally, Report and Recommendation re  
11 Motion for Class Certification (June 20, 2013) ("Class Certification Report"). CRTs are of two  
12 general types: color picture tubes ("CPTs") found in televisions sets, and color display tubes  
13 ("CDTs") used in computer monitors. Each type of CRT is manufactured in various sizes,  
14 shapes and with varying qualities. They are incorporated into CRT finished products which also  
15 vary by size, shape and quality. The CRTs have no independent utility. They are useful only for  
16 incorporation into finished televisions sets, computers and other products.<sup>1</sup>

17 Defendants are the major global manufacturers of CRTs, who allegedly controlled  
18 approximately 90% of the worldwide market for CRTs. Plaintiffs are individual consumers and  
19 entities who bought televisions and computer monitor products that contain defendants' CRTs.  
20 They contend that defendants conspired to increase prices of the CRTs between 1995 and 2007,  
21 and that this conspiracy resulted in artificially higher prices for the finished CRT products.  
22 Plaintiffs bought CRT finished products either from manufacturers of the products (e.g., Dell,  
23 Sharp or Hewlett-Packard) or from retailers (e.g., Best Buy or Wal-Mart). They seek restitution,  
24 disgorgement and damages under the antitrust, consumer protection and unfair competition laws  
25 of 21 states and the District of Columbia.

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28<sup>1</sup> CRTs are now virtually obsolete, having been supplanted by LCD panels.

To prevail on the merits, plaintiffs must show that the alleged conspiracy increased the prices that they paid for the CRT finished products manufactured or sold by defendants. Because the plaintiffs did not buy the products directly from defendant manufacturers, they will attempt to demonstrate this price increase by proving (1) that the cartel members were successful in increasing prices for their customers, in most cases the product manufacturers who bought the CRTs directly from defendants, and (2) that the direct purchasers and retailers “passed-on” the price increases down the distribution chain to the indirect purchaser consumers by including the price increases for the CRT in the prices at which they sold the finished products. To prevail on class certification, plaintiffs must demonstrate that defendants’ actions had a common impact on direct purchasers, that the pass-through of increased prices impacted consumers commonly, and that impact, damages and the quantification of damages can all be proved with common, classwide evidence.

## **Parties' Contentions**

14 In order to establish this proof, plaintiffs have retained Dr. Janet S. Netz, a partner of  
15 ApplEcon, LLC, who has submitted a number of declarations in support of plaintiffs' Motion for  
16 Class Certification and in opposition to this motion.<sup>2</sup> Broadly speaking, Dr. Netz has concluded  
17 that:

- 18           1. The cartel charged direct purchasers higher prices than the prices that would have  
19           existed but for the price-fixing.

20           2. The impact on direct purchasers was common in the form of higher prices.

21           3. Direct purchasers passed on the overcharges to retailers;

22           4. Retailers passed on the overcharges to indirect plaintiff consumers.

23           5. The amount of the overcharge to indirect purchasers can be calculated using a

Defendants attack the reliability of these opinions on the following grounds:

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<sup>28</sup> Defendants do not challenge Dr. Netz's qualifications to render opinions on these economic issues.

1       1. Dr. Netz relied in reaching her opinions on assumptions which have no support in the  
2 record or evidence. In particular, she assumed the cartel operated in the manner plaintiffs  
3 alleged, she assumed that target prices fixed for overseas sales impacted U.S. sales, she assumed  
4 that the cartel price increase was significant, and she assumed that retailed uniformly passed  
5 through the price increases.

6           2. Dr. Netz used non-random samples and price data for direct purchasers and retailers  
7 without any analysis to show that they were representative.

8           3. Dr. Netz used unreliable methodologies. In particular, she averaged and aggregated  
9 data in an improper and misleading way, she failed to perform a correlation study or refer to  
10 peer-reviewed studies to demonstrate the existence of her assumed price structure, and she failed  
11 to consider data regarding Sony and other market participants that would demonstrate her  
12 opinions were faulty.

#### Legal Standard

14       Federal Rule of Evidence 702 provides that expert testimony is admissible if “scientific,  
15 technical, or other specialized knowledge will assist the trier of fact to understand the evidence  
16 or to determine a fact in issue.” Expert testimony must be both relevant to the issues in the case  
17 and reliable. Daubert v. Merrell Dow Pharms, Inc., 509 U.S. 579, 589, 113 S.Ct. 2786 (1993)  
18 [“Daubert”]. A district court is to act as a “gatekeeper” to ensure through a rigorous analysis that  
19 the proponent of the expert opinions has satisfied its burden, but the court has broad discretion to  
20 apply the *Daubert* factors flexibly. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 and 150,  
21 119 S.Ct. 1167 (1999). The district court should focus not on the substance of the expert’s  
22 conclusions, but on the principles and methodology used to generate the conclusions. *Clarke v.*  
23 *LR Sys.*, 219 F.Supp.2d 323, 332 (E.D.N.Y. 2002). Despite the care with which the court must  
24 scrutinize an expert’s opinions, it should also adhere to the “liberal policy of admissibility” that  
25 favors admission of any evidence that may assist the trier of fact. *In re Chocolate Confectionary*  
26 *Antitrust Litigation*, No. 1:08-MDL-1935, 2012 WL 6655201 at \*5 (M.D. Pa., December 7,  
27 2012).

The Ninth Circuit concurs with these principles. “*Daubert* does not require a court to admit or to exclude evidence based on its persuasiveness; rather it requires a court to admit or exclude evidence based on its scientific reliability and relevance. [citation] Thus, an expert’s ‘inference or assertion must be derived by the scientific method’ to be admissible. [citation] A trial court has broad latitude not only in determining whether an expert’s testimony is reliable, but also in deciding how to determine the testimony’s reliability.” *Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 982 (9th Cir. 2011).

The Supreme Court in its very recent decision of *Comcast v. Behrend*, No. 110864, 569 U.S. \_\_\_, slip op. (2013) has stressed once again the need for the district court at the class certification stage to conduct a “rigorous analysis” of the necessary elements for class certification, including whether any expert opinions offered in support of certification are relevant, i.e., consistent with the liability case, and demonstrate that damages are measurable on a classwide basis. While damage calculations “need not be exact,” the methodology proffered must be “just and reasonable.” *Id.*, slip op. at 7-8.

Applying these legal principles, the Interim Special Master first summarizes Dr. Netz's analysis, methodology and findings, then addresses each of defendants' criticisms of her approach, and finally considers the applicability of three Northern District antitrust cases which have considered Dr. Netz's opinions.

### Discussion

### A. Dr. Netz's Analysis

1. The cartel was successful in raising prices for CRTs

Dr. Netz begins by describing the actions of the alleged cartel. In addition to fixing prices directly, the cartel members are alleged to have restricted capacity, fixed market shares among members, allocated customers to particular members, shared information about capacity and output, and created social opportunities for competitors to build personal trust. [Netz Declaration in Support of Motion for Class Certification, dated October 1, 2012 (“Netz Decl.”), p. 3] She documents her analysis with citations to meeting notes and other documents related to 100 “Glass Meetings” at which executives of the cartel members met weekly, monthly or less

1 frequently to discuss and agree on aspects of the CRT market, as well as to documents in which  
2 cartel members commented on the success of the cartel's actions.

3 Dr. Netz then describes the workings of successful cartels generally, based on history and  
4 economic theory. A cartel either fixes prices directly or restricts output, either of which has the  
5 effect of increasing the actual price above the "but-for" or "competitive" price that would have  
6 been charged in the absence of the cartel activity. She discusses how a successful cartel imposes  
7 discipline by reining in firms that cheat on its agreements. And she explains how a cartel may  
8 also benefit a vertically integrated firm, such as some of these defendants, which in this context  
9 would manufacture both CRTs and CRT televisions or computer monitors. She supports all her  
10 observations about cartels with detailed references to economic literature and studies. [Netz  
11 Decl., pp. 6-15]

12 Dr. Netz then embarks on a detailed description of the CRT industry and market. She  
13 reaches the following significant conclusions about the industry: (1) CPTs and CDTs are not  
14 interchangeable; (2) CRTs are differentiated by application, size, shape, finish and mask type,  
15 different resolutions and the use of various coatings. CRTs are generally designed for a  
16 particular model being developed by a particular manufacturer, although they are not customized  
17 in great detail. As a result, they cannot readily be substituted from one model or manufacturer to  
18 another, and CRTs tend to be manufactured to customer order; (3) CRTs are produced in large,  
19 expensive factories that produce at least 1 million tubes per year, cost \$100-300 million or more,  
20 and take at least 3 years to build and achieve full production. Production facilities make either  
21 CDTs or CPTs, but rarely both.

22 As to the CRT market, she reaches the following conclusions. (1) The cartel members  
23 controlled an exceptionally high percentage of the CRT market. From 1997 to 2005, cartel  
24 members controlled between 90-100% of the CDT market, and between 87-92% of the CPT  
25 market [Netz Decl., Exh. 4 & 5] Applying the Herfindahl-Hirschman Index (HHI) index, the  
26 Justice Department considers a score of over 2,500 to be "highly concentrated." The CRT  
27 market had an HHI score of 7,800 during the cartel period. [Netz Decl., pp. 27-28]; (2) The  
28 CDT market was depressed by both the 2000-2001 dot-com crash and by the growing shift from

1 CRTs to LCD monitors. As a result most vendors reported 27% excess manufacturing capacity  
 2 in 2000. A similar phenomenon occurred in the CPT market, with excess capacity reaching 19%  
 3 in 2001. [Netz Decl., pp. 28-29] (3) The CRT distribution chain is quite varied. CRT  
 4 manufacturers sell CRTs to product manufacturers (sometimes through a distributor), CRT  
 5 product manufacturers sell to a retailer (sometimes through a distributor), and the retailer sells to  
 6 the ultimate consumer. The direct purchaser may be an original equipment manufacturer  
 7 (OEM), or a contract manufacturer of which there are various types. The indirect purchasers are  
 8 big box retailers, electronic retailers, on-line retailers, and often a distributor is involved in the  
 9 chain. Consumers normally buy from a retailer, but may also buy from a product manufacturer  
 10 directly. In either case they are indirect purchasers of the CRT. [Netz Decl., pp. 29-33] Again,  
 11 Dr. Netz supports every statement with a citation to documents and deposition testimony in this  
 12 case, or to public reports..

13 Having laid this groundwork of the CRT industry and marketplace, Dr. Netz examines  
 14 the evidence that the cartel succeeded in raising prices, and concludes for four reasons that it did.  
 15 First, as noted above, the cartel had the ability to raise prices. It possessed a dominant market  
 16 share of about 80-90% of the CRT market. Moreover, there were few alternatives to CRTs until  
 17 the popularity of TFT-LCD panels grew later in the cartel period.<sup>3</sup> The CRT cartel's market  
 18 power was not threatened by potential new entrants given the high barriers to entry (high cost of  
 19 building manufacturing facilities, excess capacity).

20 Second, the CRT cartel engaged in the practices followed by other successful cartels.  
 21 The CRT members developed an elaborate structure of Glass Meetings attended by a range of  
 22 employees from top management to sales force members. These meetings not only resulted in  
 23 agreements on price, supply and market shares, but were forums for exchanging competitive  
 24 information and building trust among members. The meetings also provided a vehicle for  
 25 monitoring compliance with cartel agreements, and enforcing them. They also imposed most-

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 27 <sup>3</sup>Dr. Netz notes that the TFT-LCD market was also impacted by a cartel whose members included many of the  
 28 members of the alleged CRT cartel. [Netz Decl. pp. 36-37] The price increases generated by the LCD cartel  
 dampened the intense price competition between the two products that might otherwise have existed. [Netz Decl., p.  
 42]

1 favored customer clauses, which have the effect of raising the cost of cheating. Dr. Netz cites to  
 2 well over 100 documents and deposition testimony to illustrate the validity of her conclusions.  
 3 [Netz Decl., pp. 43-58]

4       Third, Dr. Netz examines both evidence concerning target prices, from Glass Meeting  
 5 documents that actually state the target prices, and actual sales prices, from data for six  
 6 defendants. Although she examined approximately 1,800 target prices, she notes that the  
 7 available data and evidence at this stage of the case is incomplete. Discovery will develop more  
 8 evidence concerning the setting of target prices, and more refined data on actual sales prices.  
 9 But given the presently available data, Dr. Netz concludes that the cartel was "generally  
 10 successful" in achieving actual sales prices close to their target prices. [Netz Decl., p. 64]  
 11 Overall, the cartel was able to charge prices at least 95% as high as the target price 63% of the  
 12 time, and only 13% of the sales were more than 15% below the cartel's target price. [Netz Decl.,  
 13 p. 63] A variety of analyses by characteristic (size, finish and application) show roughly  
 14 comparable results. [Netz Decl., Exh. 14-17]

15       Fourth, in addition to an analysis of documented target and sales prices, Dr. Netz relies in  
 16 two respects on common sense. First, she notes that the cartel lasted some 12 years, despite the  
 17 expense in both time and money and despite the participants' awareness that they were risking  
 18 substantial fines and jail terms. Why would they continue to fix prices if their efforts were not  
 19 bearing fruit? [Netz Decl., pp. 58-61] Second, documents produced disclose comments by  
 20 defendants congratulating themselves with the success they were having. [Netz Decl., pp. 64-65]

21       2.     The price increases impacted all direct purchasers in a common way.

22       It is not sufficient for Dr. Netz to show that some direct purchasers paid inflated cartel-  
 23 fixed prices. She must show that that it is more probable than not that the cartel's price increases  
 24 impacted all, or nearly all, direct purchasers in a common way. Her analysis in this respect is  
 25 more controversial, and is the subject of defendants' criticisms as noted below. Broadly  
 26 speaking, she tries to show that both the target prices and the actual prices paid by direct  
 27 purchasers operated in a predictable (and ultimately calculable) structure.

1        As to target prices, even though the cartel fixed target prices only for certain models (e.g.,  
 2 a flat 17" CPT), the market's price structure rippled that increase to all CRT models. To  
 3 demonstrate this Dr. Netz relies on both economic theory and mathematical analysis.

4        The economic theory argument is as follows. As noted above the CRT market is highly  
 5 differentiated: characteristics such as size, shape, finish and whether the customer is major or  
 6 minor, impact prices. Other things being equal, a 17" CPT costs more than a 14" one. A cartel  
 7 does not succeed unless it is able to raise prices on all models. If the cartel could increase the  
 8 price only for 17" CPTs, customers would tend to migrate to the 15" or 19" models, thus  
 9 blunting any impact of the price-fix. Dr. Netz cites documentary evidence that the CRT cartel  
 10 acted in two ways to broaden the impact of its price fixing. First, it directly fixed prices on  
 11 models with different characteristics (e.g., "bottom line pricing must be kept" for 15" at \$44, 17"  
 12 at \$57, etc.) Second, the cartel fixed price differentials between models (e.g., the target price for  
 13 a 15" CDT will be \$15 above the price of a 14" CDT). [Netz Decl., pp. 66-68] But economic  
 14 theory teaches that when customers move to alternative non-price-fixed models, the demand  
 15 curve for such models increases, thus increasing the price for those models. Thus, raising the  
 16 one target price causes prices of neighboring models that did not receive target prices to also  
 17 increase. In support of this conclusion, Dr. Netz cites respected economic texts, treatises and  
 18 articles.

19       Dr. Netz purports to verify the teaching of economic theory by performing a hedonic  
 20 regression.<sup>4</sup> Using target prices from defendants' documents, Dr. Netz used a mathematical  
 21 model that incorporated the principal model characteristics (size, shape, major or minor  
 22 customer, and whether sold with add-ons or "bare"). The calculation showed that 98% of the  
 23 variation in cartel target prices for CPTs is a function of these common characteristics, while  
 24 91% of the variation for CDTs is based on common characteristics. [Netz Decl., pp. 68-69] In  
 25 other words, she concluded a very high percentage of the prices for 14" CPTs moved in tandem,  
 26 as did the prices for 17" models, etc., and this was the case for all of the principal price-

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 28       <sup>4</sup> A hedonic regression is used by economists to correlate the price of goods with the features or qualities they  
          possess. [Ness Decl., p. 68, fn. 219]

1 impacting characteristics – or in her words, that prices in the CRT market during the cartel  
 2 period demonstrated a common price structure.

3 As to actual sales prices, Dr. Netz again relies on a series of hedonic regressions to  
 4 demonstrate that a very high percentage of the changes in sales prices were determined by  
 5 common variables (such as size, shape, major or non-major customer), and a very small  
 6 percentage of price changes could be influenced by individual factors (e.g., individual customer  
 7 negotiations). She used data from the six defendants that produced sales data<sup>5</sup>, some providing it  
 8 by transaction and others by month. Her calculations performed separately for different  
 9 characteristics and combinations of characteristics showed that less than 10% of the price  
 10 variance for CRTs could have been determined by non-common factors.<sup>6</sup> [Netz Decl., pp. 69-71  
 11 and Exh, 23 & 24]

12 Dr. Netz concludes from both theory and mathematical analysis that both target and  
 13 actual sales prices for all CRT models moved in a highly predictable structure based on product  
 14 characteristics that are common to the class, although the cartel set prices on only selected  
 15 models. Accordingly, she concludes that proof of harm to all direct purchasers can be proved  
 16 without any individual inquiry into any particular product or the conduct of any particular  
 17 customer.

18       3.     The direct purchasers passed-on the price increases to indirect purchasers

19       Dr. Netz relies on economic theory, evidence from defendants' documents and empirical  
 20 pass-through studies to demonstrate that manufacturers of televisions and monitor products, and  
 21 the downstream retailers, passed through the cartel price increases to ultimate consumers.

22       Economic theory teaches that firms will increase their prices to cover cost increases that  
 23 are significant, non-transitory and industry-wide. It stands to reason that a firm might decide to  
 24 absorb a price increase that was minimal, or temporary, or not aimed at all its competitors. But  
 25 there is no rational reason for a firm to absorb a significant price increase that will continue

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 27<sup>5</sup> Chunghwa, Hitachi, Panasonic, Phillips, Samsung and Toshiba

28<sup>6</sup> Those percentages are actually for the logarithm of price, but Dr. Netz explains that the difference between the log  
 and prices themselves is negligible.

1 indefinitely and that all one's competitors are encountering. Dr. Netz argues that the cartel price  
 2 increases satisfied all three conditions, with multiple citations to economic literature. [Netz  
 3 Decl., pp. 73-78]

4 Dr. Netz also points to numerous comments in defendants' documents that show that they  
 5 anticipated and observed that their price increases for CRTs were being incorporated into the  
 6 prices for CRT products. [Netz Decl., pp. 78-79, Exh. 29-32]

7 Dr. Netz also uses regression analysis to perform 47 separate studies of prices and costs  
 8 in the distribution channel, using a wide variety of data, to calculate the pass through rate. Her  
 9 pass-through studies regress the price against the cost, either for the entire distribution chain or  
 10 for only one level in the chain. The results of those studies are discussed in Section A.4 below.

11       4.     The amount of overcharge paid by both direct and indirect purchasers can  
 12 be calculated using a common methodology

13       Direct Purchasers: The amount of overcharge to direct purchasers is the difference  
 14 between the actual sales price and the "but-for" price that would have obtained had there been no  
 15 cartel. Since the "but-for" price cannot by definition be observed, it is necessary to predict what  
 16 it would have been, using assumptions and inferences derived from and consistent with  
 17 economic theory and the evidence in the case. [Netz Decl., pp. 83-84] Dr. Netz offers four  
 18 formulaic methods to make an estimate of "but-for" prices: (1) economic determinants method  
 19 (regression analysis to isolate the impact of the cartel from other price determinants such as  
 20 demand, cost and market structure, using data from within and outside the cartel period); (2)  
 21 benchmark comparisons method (using data for internal rates of return and price-cost margins  
 22 from industries similar to that for CRTs in which no cartel operated); (3) simulation method  
 23 (creating a model for the CRT industry using available data for demand, costs and competition  
 24 that will calculate marginal prices in the absence of a cartel); (4) market power method  
 25 (estimating the but-for elasticity of a firm's demand from produced sales and cost data, and  
 26 converting that through a mathematical formula into a "but-for" price). Dr. Netz provides  
 27 supporting references from economic literature supporting the validity and relevance of all these  
 28 methods. She concludes that sufficient data is, or is likely to be, available to use any of these

four methods – all of which rely on data common to the entire class and do not require input of any individual evidence. [Netz Decl, pp. 83-97]

Indirect Purchasers: Dr. Netz initially performed 40 separate regression analyses using different data sets in order to determine the pass-through rate for CRT products. The data sets included large retailers like Best Buy, Kmart and Sears, product manufacturers and large distributors; they included 17 years of transactions; in total her studies encompass over 131 million CRT tubes and products and all levels of the distribution channel. [Netz Rebuttal, p. 74] In response to defendants' odd criticism that this represented a "tiny sample," [Memorandum of Law in support of Defendants' Motion to Strike the Proposed Expert Testimony of Dr. Janet S. Netz ("Defs' Memo"], 21:9], Dr. Netz performed seven additional pass-through studies, using data from K-Mart, Radio Shack, bestbuy.com and Sears. The 47 studies found a pass-through rate of 100% or greater in 36 of the studies, and a rate not statistically significantly less than 100% for the other 11 studies.<sup>7</sup> Each analysis compared selling price with cost. Her declaration explains the data she used, both complete and incomplete, and the variables she used to conduct her different studies. For example, she performed three calculation of Wal-Mart's pass-through rate using data for suggested retail prices, wholesale list prices and actual transaction data. The Wal-Mart data showed pass-through rates of 106%, 110% and 112% -- meaning that a product manufacturer's price increase to Wal-Mart of \$10 would be passed on to the customer as an increase of \$10.60, \$11.00 or \$11.20.

20 From these calculations, Dr. Netz concludes that it is possible to quantify the pass-  
21 through rate by common evidence, and further concludes that virtually all class members  
22 suffered common harm in an amount of at least 100% of the cartel overcharge. [Netz Decl., pp.  
23 97-104]

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<sup>7</sup> To show antitrust impact it is not necessary that the pass-through rate be 100%. For example a pass-through rate of 50% means that half the cartel price increase was passed-through, which still amounts to common harm to the class. A pass-through rate greater than 100% means that the manufacturer or retailer increased its prices by more than the cartel-generated increase.

1           5.     The amount of classwide damages can be calculated using a common  
2     formula

3       Dr. Netz states that the total damage to the class is the mathematical product of  
4     defendants' revenues from the products at issue, the overcharge rate to direct purchasers and the  
5     pass-through rate to indirect purchasers. She would obtain data for defendants' revenues from  
6     data that would allow her to isolate U.S. shipments of CRT tubes, then eliminate government  
7     purchases, and limit the results to the states that are part of the State Classes. This analysis,  
8     along with date concerning average weighted prices, would result in a calculation of revenues  
9     from class members for each product for each year. Dr. Netz would then multiply these yearly  
10    class revenue figures by the appropriate overcharge rate and pass-through rate – calculated by the  
11    methods outlined above — to obtain a damage figure for the entire class, for each product and  
12    for each year. [Netz Decl., pp. 105-107]

13           B.     Defendants' Criticisms

14       1.     Operation of the Cartel: Defendants attack Dr. Netz for assuming that the facts  
15     alleged in the complaint about how the cartel conducted itself are true. Specifically, they attack  
16     her for assuming that all participants adhered to every target price, and that target prices were  
17     global. First, she is entitled to assume that the allegations of the complaint about defendants'  
18     conduct will be proven. Her job is to opine as to the economic impact of that conduct on class  
19     members, if that conduct is proven. That is all that she purported to do. Moreover, her reports  
20     discuss in detail the evidence that the cartel was effective and that the increased prices it  
21     instituted were significant, long-lasting and industry-wide. The Interim Special Master rejects  
22     defendants' assertions that Dr. Netz made unwarranted or evidence-free assumptions about how  
23     the cartel worked. Rather, her description of the cartel's operations were closely tethered to  
24     documents and testimony in the case, as well as to plausible economic theory about how  
25     successful cartels in general operate. Although other evidence may exist to rebut her analysis,  
26     that will be the subject for cross-examination, and will bear on the weight not the methodological  
27     validity of her analysis.

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1       2. Relevance of Target Prices to CRTs sold in the United States: Defendants  
 2 contend that Dr. Netz “assumed” that target prices for CRTs sold overseas applied to class  
 3 members who purchased CRT products in the United States. Defendants’ expert, Professor  
 4 Willig, noted that U.S. prices for CRT products tended to fluctuate during some period more than  
 5 worldwide prices because U.S. consumers took to LCD panels more quickly than consumers in  
 6 the rest of the world. [Expert Report of Robert D. Willig, 12/17/12, ¶18 and Exh. 4A, 4B, 5A  
 7 and 5B] However, it appears to the Interim Special Master that Dr. Netz correctly relied on data  
 8 that shows that a very high percentage of CRT products, regardless of where they are assembled,  
 9 use CRTs made in Asia. Although a small percentage of tubes are evidently made in the U.S.,  
 10 their impact on price, if any, will go to the weight of the analysis, not the methodology. [Netz  
 11 Rebuttal Decl., pp. 53-56] Therefore, when the cartel fixed prices for sales of tubes to  
 12 manufacturers whose assembly plants were in Asia, or sold tubes to U.S.-based manufacturers, it  
 13 stands to reason that the increased prices of tubes would impact U.S. buyers of the resulting  
 14 products regardless of where they were assembled. Moreover, in response to defendants’  
 15 criticism, Dr. Netz analyzed data for both target and U.S. sales prices for CPTs, which showed a  
 16 higher correlation than for global sales of CPTs. [Netz Rebuttal Decl., p. 56]

17       The Interim Special Master concludes that defendants’ assertion that Dr. Netz ignored  
 18 fluctuations in U.S prices for CRT products, to the extent it has any validity, is an attack on the  
 19 weight of her opinions not on the scientific reliability of her methodology.

20       3. Failure to show that Target Prices Covered the Class Period: Defendants criticize  
 21 Dr. Netz for using target prices for CDTs for only 7 months of the 12 year period in her  
 22 comparison of target prices and actual prices. First, it is not clear that defendants are correct.  
 23 Dr. Netz appeared to compare target with sales prices from 1996-2006. [Netz Decl., Exh. 14].  
 24 But even if she did use target prices for a portion of the class period, defendants have not  
 25 provided any basis to question her expert judgment that her data is representative.

26       Defendants also criticize her for relying on a hedonic regression analysis to verify the  
 27 existence of a price structure among different models of CRT products, and not performing a  
 28 price correlation analysis to confirm the purported structure. Dr. Netz responds that the hedonic

1 regression is a more robust analysis than a correlation study, and the fact that analyses of  
 2 different data sets all confirmed the existence of a price structure verifies that her methodology  
 3 was appropriate. The Interim Special Master concludes that defendants have not demonstrated  
 4 that the hedonic regression is an inappropriate methodology to use to determine whether CRT  
 5 prices operated pursuant to a structure. It may be that a price correlation analysis would also  
 6 have done the job, or that it is even more suited to this situation. But the issue on this motion is  
 7 not whether Dr. Netz's methodology is the best or the only correct one, but whether it is  
 8 basically sound and relevant to the issue being analyzed. *In re Pressure Sensitive Labelstock*  
 9 *Antitrust Litigation*, No. 3:03-MDL-1556, 2007 WL 4150666 (M.D. Pa., November 19, 2007)  
 10 [price correlation analysis did not invalidate expert's conclusion that a price structure existed, *Id.*  
 11 at \*19] Plaintiffs have demonstrated that her methodology for analyzing target prices was "just  
 12 and reasonable."

13       4.     Use of Average Price and Sales Data: Defendants attack Dr. Netz's methodology  
 14 for making use in parts of her analysis of average or aggregated data. Their contention is that the  
 15 use of averaging masks price differences that would be revealed by using only transaction-level  
 16 data. Dr. Netz makes a number of responses. First, she averaged some price data by month in  
 17 order to make it uniform across all the data sets she used. Since some data was produced by  
 18 month, and other by transaction, in order to use all available data she was forced to make it  
 19 uniform. [e.g. Netz Decl., p. 70] The alternative was to discard large amounts of data – for  
 20 which she would no doubt have been subject to different criticism. Second, in her comparison of  
 21 target prices to actual sales prices, she aggregated sales price data into "groups" of CRTs that  
 22 shared similar common basic characteristics [size, finish, application (monitor or TV), and finish  
 23 (bare or with enhancements)]. She notes that she selected these groupings because they match  
 24 most closely the way the target and sales price data is organized, and concedes that are numerous  
 25 other variables (aspect ratio, dot pitch, frequency) that can have an impact on price.

26       Defendants repeatedly claimed that Dr. Netz admitted at her deposition that, if half the  
 27 sales prices were 25% above the target price, and another half were 25% below the target price,  
 28 her "average" would show that all sales were at 100% of the target price, and therefore that all

1 purchasers had been injured “when, under the hypothetical, at least half were not injured at all.”  
 2 (Defs. Memo, p. 5) Dr. Netz denies that she made any such admission – she admitted only that  
 3 the arithmetic of averages dictates that the average of 25% above and below a certain number –  
 4 this case the target price – will be that number. Moreover, there is a basic flaw with defendants’  
 5 reasoning. Impact or injury depends on whether a purchaser buys at a price artificially fixed  
 6 above the competitive “but-for” price, not on whether he buys above, at or below the target price.  
 7 Thus, all the hypothetical purchasers in defendants’ example may well have been harmed  
 8 depending on how much the target price was set above the competitive price. Defendants’  
 9 much-touted example does not, in the Interim Special Master’s judgment, detract from Dr.  
 10 Netz’s conclusion that the cartel price increases had classwide impact.

11 In summary, defendants are really saying that the only valid data is the most  
 12 disaggregated, granular data. But disaggregating data to distinguish between every variation, no  
 13 matter how small, among CRTs can result in using data sets that are too small to be meaningful.  
 14 And requiring an expert to use only transaction data, when much of the data is in monthly form,  
 15 has its own downside of excluding a lot of relevant data. Indeed, in much of her analysis Dr.  
 16 Netz did make use of transaction level data.<sup>8</sup> And it is simply wrong to say that an expert’s  
 17 analysis is inadmissible unless it analyzes every sale at the transaction level. Since antitrust  
 18 defendants habitually attack plaintiffs’ experts for averaging data, it is not surprising that several  
 19 courts have considered – and approved – the appropriate use of averages. See, e.g., *In re TFT-*  
 20 *LCD (Flat Panel) Antitrust Litigation*, No. M 07-1827 SI, 2012 WL 555090 at \*8 (N.D. Cal.,  
 21 February 21, 2012) [“LCD Daubert”]; *In re Aftermarket Automotive Lighting Products*  
 22 *Antitrust Litigation*, 276 F.R.D. 364, 372-374 (C.D. Cal. 2011) [method of averaging across  
 23 products not a basis to invalidate an expert’s methodology].<sup>9</sup> At bottom, there are plainly  
 24 situations in which averaging is appropriate and others when it would be unreliable. But the

25  
 26 <sup>8</sup> Dr. Netz points out that Dr. Willig also made use of averages even when transaction-level data was available.  
 27 Declaration of Janet S. Netz, PhD. In Support of Indirect-Purchaser Plaintiffs’ Opposition to Defendants’ Motion to  
 28 Strike the Proposed Expert Testimony of Dr. Janet S. Netz, p. 10].

<sup>9</sup> While courts have also criticized averaging, they did so on class certification motions, not as a ground on which to  
 declare an expert’s analysis inadmissible, and there were unique characteristics of the marketplaces in those cases  
 that make them inapplicable to the present facts. See discussion in Section C, below, of *GPU and Flash Memory*.

1 Interim Special Master concludes that Dr. Netz has provided rational justifications for her use of  
 2 averages when the form of the data made it reasonably necessary, and aggregated data in rational  
 3 groupings that matched the data she had.

4       5.     Retailer Pass-Through: Defendants assert that Dr. Netz made a “false  
 5 assumption” that retailers uniformly passed on price increases to consumers, without studying  
 6 actual pricing data. In fact, defendants themselves are guilty of a false assumption. Dr. Netz did  
 7 not reach her conclusion based on a naked assumption. She relied on sound economic theory  
 8 that pass-through occurs when price increases are significant, industry-wide and not transitory.  
 9 And she relied on defendants’ own words in contemporaneous documents that record their  
 10 observations and conviction that pass-through was occurring. Defendants point to allegations in  
 11 pleadings and the testimony of Best Buy and Costco to show that retailers do not always pass on  
 12 price increases. Pleading allegations are a notably weak source of objective evidence. And even  
 13 isolated snippets of deposition testimony are not particularly persuasive, given that the witness’s  
 14 response depends on the precise question asked and the context in which it was asked.

15       A more cogent criticism comes from analysis by defendants’ expert, Dr. Robert Willig,  
 16 that identifies instances from the data in which retailers evidently did not pass-through every  
 17 single price increase. [Willig Decl. ¶135, Exh. 26] But Dr. Netz adequately responds to this  
 18 criticism by noting that she did not conclude that every price increase was passed on, but rather  
 19 that price increases comparable to those imposed by the cartel – significant, industry-wide and  
 20 long-lasting – were. [Netz Rebuttal, p.63-64]

21       Defendants also claim that Dr. Netz admitted in her deposition that she couldn’t opine  
 22 that the cartel price increases were “significant” or “permanent,” and that there is no basis to  
 23 conclude they were “industry-wide” since Sony, a large market player, was not part of the cartel.  
 24 [Defs. Reply, pp. 10-11] There is some justice in defendants’ criticism of her failure to date to  
 25 provide more support for her conclusion that the cartel price increases were both “significant”  
 26 and “permanent.” However, her conclusions are supported by both common sense (not  
 27 necessarily a bad thing) and statistical analysis. First, she sensibly notes that defendants were  
 28 unlikely to have continued the cartel for 12 years given the risks were they not obtaining

1 “significant” price rewards. Second, a retailer of ever-changing high-tech products will surely  
 2 view a price increase that persists for years as for all practical purposes “permanent.” As to  
 3 Sony, Dr. Netz argued that, because Sony’s market share did not increase, Sony had little, if any,  
 4 dampening effect on the cartel’s ability to impose price increases on the entire CRT market.  
 5 Moreover, Dr. Netz buttresses her conclusions that the price increases had a common impact by  
 6 her 47 independent regression analyses discussed in Section A.3 and A.4 above.

7       As noted above defendants also accused Dr. Netz of a “false assumption” because she  
 8 used only a “tiny sample” of retailer data to demonstrate positive pass-through. It is simply  
 9 wrong to characterize 47 studies of tens of millions of transactions from 14 retailers over 17  
 10 years and relating to large entities at all stages of the distribution channel as “tiny.”

11       As to all these criticism of her conclusions about retailer pass-through, the Interim  
 12 Special Master is not persuaded that her methodology was faulty, or that she made unwarranted  
 13 assumptions. Surely there will be challenges to the correctness of her data selection, and  
 14 defendants will offer competing methodologies. However, in ruling on admissibility a court  
 15 need not choose between competing experts provided that the opinions in question meet basic  
 16 criteria for scientific reliability – as Dr. Netz’s opinions persuasively do. *See, Ellis*, 657 F.3d at  
 17 982.

18       6.       Manufacturer Pass-Through: Defendants’ criticism again is not directed at Dr.  
 19 Netz’s methodology, but rather attacks her selection of data and failure to conduct a statistical  
 20 analysis to prove that her data was representative. Dr. Netz responds that she used all data that  
 21 was in usable form and available to her, and that there is no magic statistical test to verify the  
 22 representativeness of data. When different analyses produce roughly comparable results, that in  
 23 itself confirms the representativeness of the data. Also, the selection of data is plainly a matter  
 24 within the judgment of an expert. While different experts might disagree on data selection, that  
 25 does not call into question the methodology being used.

26       7.       Improper Reliance on “Naked Economic Ipse Dixit”: Defendants attack Dr. Netz  
 27 for relying on economic theory to fashion a common price structure, but ignored evidence that  
 28 actual prices varied widely based on individual customer negotiations and other individualized

1 features of the distribution channel. Defendants' criticism relies largely on deposition testimony  
 2 by employees of manufacturers and retailers. [Def. Memo, pp. 29-31]. Dr. Netz responds by  
 3 noting that the presence of individual price negotiations, clearance sales, volume purchases,  
 4 discounts for buying related products, and the like does not invalidate the notion that the cartel  
 5 had common impact. [Netz Rebuttal Decl., pp. 44-47] Her theory is that, because the cartel was  
 6 effective in increasing prices, all of those individualized discounts started from an artificially  
 7 increased platform. That is, but for the cartel, the customers who obtained various price  
 8 discounts would have paid even lower prices. The Interim Special Master concludes that Dr.  
 9 Netz's response is in accordance with sound economic logic. A reading of Dr. Netz's reports  
 10 shows that she did not in any way "ignore" data regarding individualized discounts; rather, she  
 11 demonstrated why they do not invalidate her theory.

12       C.     Other Decisions Considering Dr. Netz's Methodologies

13       The parties each place great weight on decisions from this Court in three cases that dealt  
 14 with Dr. Netz's opinions on antitrust impact. Plaintiffs point to Judge Illston's decisions that  
 15 uphold Dr. Netz's opinions in class certification and a *Daubert* challenge in the *In re TFT-LCD*  
 16 (*Flat Panel*) *Antitrust Litigation*, 267 F.R.D. 583 (N.D. Cal. 2010) [class certification] and *In re*  
 17 *TFT-LCD*, No. M 07-1827 SI, 2012 WL 555090 (N.D. Cal. Feb. 21, 2012) [*Daubert*] cases.  
 18 Defendants rely on *In re Flash Memory Antitrust Litigation*, No. C-07 0086 SBA, 2010 WL  
 19 2332081 (N.D. Cal. June 9, 2010) ["*Flash Memory*"] and *In re Graphics Processing Units*  
 20 *Antitrust Litigation*, 253 F.R.D. 478 (N.D. Cal. 2008) ["*GPU*"].

21       TFT-LCD Case: *LCD* dealt with a product and distribution chain that was highly  
 22 comparable to that of the CRT industry. LCD flat panels succeeded CRTs in the marketplace;  
 23 neither product was sold stand-alone, both were imbedded in consumer products like televisions  
 24 and monitors; many of the same companies made both LCD panels and CRTs; many of the same  
 25 retailers sold them. Like CRTs, LCD panels were not highly customized for particular  
 26 customers. Both products exhibited a limited number of variations that impacted price, such as  
 27 size and finish. But they are not highly individualized as are, for example, the graphics cards  
 28 used in video games that were at issue in *GPU*.

1        Judge Illston dismissed challenges to Dr. Netz's opinions on a class certification motion,  
 2 a motion to decertify, summary judgment motions, and a *Daubert* motion to strike her testimony.  
 3 Two themes run through Judge Illston's opinions in *LCD*. First, plaintiffs need not prove the  
 4 precise price increase that impacted every purchase by every class member of an LCD product.  
 5 “[P]laintiffs need not be able to articulate the precise degree to which every individual class  
 6 member was injured; it suffices to show that it was more likely than not that classwide impact  
 7 had occurred.” 2012 WL 555090 at \*3. Second, most of defendants’ attacks on Dr. Netz – her  
 8 use of regression analysis, her use of averages, reliance on economic theory – are proper subjects  
 9 for cross-examination, but “do not render her opinion so inherently suspect that it may not be  
 10 admitted at trial.” 2012 WL 555090 at \*8.

11       A critical distinction between the present case and the *Flash Memory* and *GPU* cases  
 12 discussed below is that the courts in *Flash Memory* and *GPU* were not ruling on Rule 702  
 13 *Daubert* motions to exclude evidence. The issue of the admissibility of the expert’s opinions  
 14 was not before those courts. Other courts have declined to apply to a *Daubert* issue case law that  
 15 was rendered in other contexts such as class certification or summary judgment. E.g., *In re*  
 16 *Chocolate Confectionary Antitrust Litigation*, No. 1:08-MDL-1935, 2012 W.L. 6652501 at \*6  
 17 (M.D. Pa., December 7, 2012)

18       GPU Case: *GPU* dealt with a conspiracy to fix prices of graphic processing units that  
 19 were mounted on graphic chips and cards, which were in turn used in game consoles, laptops,  
 20 mobile devices and other products. Graphic cards were sold directly to consumers, and  
 21 incorporated into products; graphic chips were not sold individually. There were “hundreds” of  
 22 types of graphic cards or chips. A very large percentage of graphic cards and chips were  
 23 individually customized for a particular customer or application. The obvious example of  
 24 customization would be for use in various typed of video games. The “overwhelming majority”  
 25 of wholesale purchases of chips and cards were individually negotiated, the ultimate price  
 26 depending on the volume, market power of the purchaser, degree of customization and many  
 27 other factors. 253 F.R.D. at 480-481.

1 Dr. Netz's only contribution to *GPU* was to perform an analysis of pass-through to  
2 indirect purchasers, which of course depended on plaintiffs' ability to demonstrate common  
3 impact on direct purchasers. Judge Alsup found that a different expert had failed to demonstrate  
4 classwide impact on direct purchasers, which was one ground on which he rejected Dr. Netz's  
5 analysis. However, he went on to find her analysis inadequate to show classwide pass-through  
6 because, due to the fragmentation of the distribution chain and the variability of the product, Dr.  
7 Netz's regression analyses were unduly individualized (e.g., her eight regression analyses shared  
8 only two common variables). Therefore, he concluded that the nature of the GPU market would  
9 require her to construct separate equations with different variables for each reseller in each part  
10 of the distribution channel in order to derive the pass-through rate applicable to each one. 253  
11 F.R.D. at 503-504. The fragmentation and variability of the GPU market would render Dr.  
12 Netz's analysis either "overly reliant on averages" or "unmanageably individualized." 253  
13 F.R.D. at 504.

14 Thus, *GPU* is plainly distinguishable from the present case. First, Judge Alsup never  
15 considered the admissibility of Dr. Netz's opinions, since he was ruling on class certification, not  
16 on a *Daubert* motion. Second, his criticism of Dr. Netz was not that her methodology – her use  
17 of averaging, regression analyses and economic theory – was unscientific, but rather that, given  
18 the GPU product variability and diverse market place, she would be unable to demonstrate  
19 impact, pass-through and damages on a common, classwide basis. The problem for class  
20 certification was the GPU marketplace, not the viability of Dr. Netz's analysis. Therefore, *GPU*  
21 is inapposite to the admissibility ruling that is before the Court in this case.

22 Flash Memory Case: This case dealt with a form of semiconductor memory embodied in  
23 NAND flash memory chips, which are sold either as part of NAND flash memory cards or are  
24 incorporated in electronic devices like USB flash drives, media players (e.g., iPods), laptop  
25 computers, mobile phones, gaming devices, GPS devices and others. Defendants in the case  
26 produced over 2,000 different types of NAND chips. Judge Armstrong found that over 82% of  
27 purchases of NAND chips were made by three direct purchasers – all large companies with  
28 substantial market power to obtain individually negotiated prices. 2010 WL 2332081 at \*9.

1 Because of that particular market structure – utterly unlike that in the present case – the Court  
2 found Dr. Netz’s opinion regarding impact on direct purchasers to be unpersuasive. As for pass-  
3 through to indirect purchasers, the Court noted that Dr. Netz had performed regression analyses  
4 using data from five different retailers, which the Court found amounted to “a retailer-by-retailer,  
5 manufacturer-by-manufacturer and product-by-product analysis,” which failed to show that pass-  
6 through could be proven with common, classwide evidence. 2010 WL 2332081 at \*12.

7 Therefore, as in *GPU*, the Court was unpersuaded, given the particular characteristics of  
8 the NAND market place (extreme concentration of direct purchasers, enormous variety in the  
9 types and functions of chips, a more multi-layered distribution channel than that for CRTs), that  
10 Dr. Netz would be able reliably to show common impact through classwide analyses. The Court  
11 did not find that her methodologies were unsound in themselves, and as noted did not find that  
12 her opinions were inadmissible. For these reasons, *Flash Memory* does not provide a rationale  
13 for excluding Dr. Netz’s opinions in this case.

14 In summary, the *LCD* case is closely parallel to *CRT* in so many respects: the structure  
15 of the *CRT* and *LCD* markets, the nature of the distribution channels, the similar uses to which  
16 tubes and panels are put, the presence of many of the same defendants in both cases, the robust  
17 evidence of many years of high-level meetings and agreements among competitors (Crystal  
18 Meetings in *LCD*, Glass Meetings in *CRT*), indictments in both cases of companies and  
19 executives. Given those similarities, Judge Illston’s finding that Dr. Netz’s opinions are  
20 admissible is entitled to great weight. In contrast, *GPU* and *Flash Memory* were not Rule 702  
21 motions; the opinions reference no indictments; the products were not similar to *CRT* tubes and  
22 exhibited far more variations in characteristics, which meant that the markets for graphic discs  
23 and cards and for NAND memory chips were far more disintegrated than the *CRT* market;  
24 individually negotiated prices predominated in both markets, whereas they were the exception  
25 for *CRT*s. These distinctions vastly weaken the relevance of these two decisions to the issue of  
26 admissibility of Dr. Netz’s opinions in the present case.

27

28

### Conclusion

For the foregoing reasons and for good cause shown, the Interim Special Master recommends that the Court DENY defendants' motion to exclude expert testimony of Dr. Netz.

Dated: June 20, 2013

Martin Quinn  
Interim Special Master

Approved/Disapproved/Modified

DATED:

Hon. Samuel Conti  
United States District Judge